Epidemiological Profile of Children Infected with Bordetella pertussis at Varela Santiago Children's Hospital: a Retrospective Study

2282. Clinical and Radiologic Manifestations of Cat-Scratch Osteomyelitis in Children

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Background. Osteomyelitis (OM) is a rare sequela of cat scratch disease (CSD), often with atypical bone involvement. Clinical presentation of CSD OM is not well described. We sought to determine the clinical and radiologic manifestations of CSD OM patients admitted to Nationwide Children's Hospital.

Methods. EMR of inpatients was reviewed between January 2010 and March 2017. Clinical, radiological, and histopathological findings were collected.

Results. Nine patients with positive cat scratch serology and/or tissue PCR were identified. Mean age was 6 years and 8 months (range 3–12 years). Patients had a prolonged course of illness before the diagnosis was made (mean 9.7 days). All patients had fever and affected bone area pain. Patients had normal WBC (mean 11,800/mm3) and modest ESR (mean 53.2 mm/hours) and CRP (mean 5.2 mg/dl) elevations on admission. Six patients had osteomyelitis at ≥ 2 sites (multifocal) with no contiguous lymphadenopathy (LAD). The vertebrae and pelvic girdle were the most common sites. Two patients had contiguous paraspinal abscesses, and 1 patient had a concomitant lymph node (LN) abscess. No osteolytic lesions were identified. Serology in all (9 of 9 IgG, 7 of 9 IgM) and PCR of bone in 2 of 2 patients were positive. All patients received antimicrobial therapy with median duration of 28 days (IQR 15–50).

Patient	Liver, spleen, LAD	Vertebra/ spine/pelvis	Long bones	Other bones	Treatment	Treatment before admission evaluation
1	Liver, Left axillary LAD	T7, S2, ischium	Femur, tibia	Skull base, 11th rib sternum,	Rifampin (R), doxycycline (D)	
2	Bilateral inguinal LAD	T3–5, T12, L1–2, S1, acetabulum			R, D	R, Azithromycin (A)
3		L2			A	A
4	Paraspinal and epidural abscess, inguinal LAD	T8, T11			R, D	A
5	Contiguous LAD with abscess		Humerus		TMP/SMX (T), R	A
6	Left inguinal LAD, small liver and spleen lesions	T11, S1–4			T, R, ciprofloxacin (C)	C, R, A
7	Psoas muscle, paraspinal abscess	L3, L5, S1, sacroiliitis		4^{th}rib	C	T, R
8	No	T3			A	
9	No	Ischium	Femur		A, R	

Conclusion. CSD OM has an indolent course of illness with moderate elevation of inflammatory markers. Unlike previous reports of CSD and other bacterial OM, multifocal osteomyelitis without contiguous LN involvement was common. Despite significant variations in treatment duration and antimicrobial therapy choices, all patients had clinical resolution of their CSD-associated disease.

Disclosures. **All authors:** No reported disclosures.

2283. Epidemiological Profile of Children Infected with *Bordetella pertussis* at Varela Santiago Children's Hospital: a Retrospective Study

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Background. Pertussis, also called whooping cough, is an acute infectious disease of high transmissibility transmitted through aerosol particles released during the catarrhal phase and paroxysmal cough. Since the 1990s its incidence has increased and atypical clinical forms have been identified, mainly in newborns and adults. We hypothesized that there is a relationship between the high incidence of pertussis infection in children up to 6 months of age and genetic changes in the circulating strains of *B. pertussis* leading to inefficacy of diphtheria, tetanus, and pertussis vaccine (DTP).

Methods. Data were obtained from the medical records of hospitalized patients at the Varela Santiago Children's Hospital in Brazil from January 1, 2013 to December 31, 2013.

Results. A total of 33 cases of pertussis hospitalizations were found, where 75.7% (25/33) of the patients were 6 months of age or younger (6 patients were 30 days old or younger while 19 ranged in age from 31 days to 6 months). Of these, 54.5% (14/25) were in exclusive breastfed children. Only 18.2% (6/33) of the patients had the appropriate administration of DTP doses according to their age. Signs and symptoms were: cough 100%, cyanosis 63.6%, fever 48.5% and inspiratory winch 33.3%. Azithromycin was used as monotherapy in 90% (30/33) of the cases and the mean time of hospitalization was 9.48 days ranging from 6 to 30 days. No patient died.

Conclusion. We identified a high prevalence (75.7%) of B. pertussis infection in children up to 6 months of age. This is likely explained by the low vaccination rate (18.2%) and the low percentage of exclusive breastfeeding of the studied population. The low rate of vaccination is unexpected, given that there has been greater access to vaccination in recent decades in Brazil. In addition, the cases evolved with an atypical clinical presentation, since the classic symptoms of the catarrhal stage were absent or had a such short duration that such symptoms were no longer present at the time of hospitalization. Our study does not exclude the possibility that genetic changes are occurring in the circulating strains of B. pertussis and that DTP seems to have less efficacy on these new strains, but future studies will be needed to specifically test this hypothesis.

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2285. The Impact of Routine *Chlamydia trachomatis* (CT) Screening during Pregnancy on the Seroepidemiology of Chlamydial Infection in Children, 1991–2015

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Background. CT remains the most prevalent STI in developed and developing countries.Prenatal screening and treatment of pregnant women has resulted in a dramatic decrease of perinatal CT infection. There have been limited seroepidemiologic studies in unselected children and adolescents following the implementation of routine CT screening as first recommended by the CDC in 1993.

Methods. Anonymized banked sera (-80°C) and prospectively collected sera from children and adolescents in Brooklyn, NY, were tested for anti-CT IgG via a validated enzyme immunoassay. Serum samples were divided by collection years: Group 1 (1991–1995, prescreening) and Group 2 (2012–2015, post-screening). Infants <1 year of age were excluded due to interference of maternal antibody. Maternal screening and CT infection rates during pregnancy were determined via a retrospective review of 200 random charts (2016–2017). Statistical analysis by Fisher's exact test.

Results. 297 serum samples were identified (age range 1–20 years). 18.5% (10/54) of subjects ≤10 years of age in Group 1 tested positive for anti-CT IgG, while none tested positive in Group 2 (0/55), $P = .0006$. Children >10 years had a prevalence of 10.3% (3/29) in Group 1 and 7.5% (12/159) in Group 2, $P = .7$. Maternal screening rate was estimated at 95.5%, with 100% screened if <25 years of age. The rate of maternal CT infection during pregnancy was 4.5% (9/200) overall, 8% (4/49) in <25 year olds and 3.3% (5/151) in ≥25 year olds.

Conclusion. Children ≤10 years of age in the prescreening group (1991–1995) had relatively high rates of seropositivity, likely due to persistence of antibody from perinatal infection. The absence of CT antibody in children ≤10 years of age in the post-screening group (2012–2015) and the high rate of prenatal screening (>95%) in this high-risk population suggest prenatal screening and treatment of pregnant women has been effective at preventing perinatal CT infection.

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2286. Risk Factors for Community-Associated *Clostridium difficile* Infection in Children

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